



Health Information Exchange Strategic and Operational Plan Profile

Overview

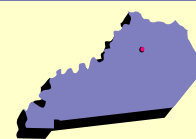
The U.S. Census Bureau estimates Kentucky's population to be 4.3 million. Largely rural, 98 of the state's 120 counties are categorized as non-metropolitan; 54 are designated by federal statute as Appalachian. Eighty five (85) counties are designated as being all, or partially, medically underserved.

In 2009, the Kentucky Medicaid program provided coverage to nearly 800,000 members. Another 300,000 are expected to join the program in response to the Affordable Care Act. There are approximately 4,200 primary care physicians statewide. The state has 124 hospitals, of which 100 are acute care, including 30 designated as Critical Access Hospitals (CAH). The majority of these are small community hospitals. Consequently, the state has a number of extremely active medical trading partnerships, supported by regional medical centers and the state's two university-affiliated medical centers. Additionally, with approximately 16 percent of the population without health insurance, federally qualified health centers, public health departments, and other safety net providers are an important source of preventive and primary care for many.

Model and Services

The Governor's Office of Electronic Health Information (GOEHI) was created within the Cabinet for Health and Family Services (CHFS) to build and operate the state-wide Kentucky Health Information Exchange (KHIE), with technical assistance from the Office of Administrative and Technology Services (OATS).

Initially funded through a \$4.9 million Medicaid Transformation Grant, KHIE became operational in six hospital systems and one clinic April 1, 2010. The early core components already developed by KHIE to enable statewide exchange include: a master patient/person index (data collected from participating providers and Medicaid), a record locator service, provider/user authentication, and other services such as logging audits and alerts, supporting electronic prescribing, patient demographics, laboratory and imaging reports, past medical diagnoses, dates of services, hospital stays, a statewide immunization registry, and a provider portal.



State: Kentucky

HIT Coordinator:

Jeff Brady

Statewide HIE:

Kentucky Health Information Exchange (KHIE)

Award Amount:

\$9,750,000

Contact:

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Other Related ONC funding in Kentucky:

Kentucky Regional Extension Center at
University of Kentucky \$6,005,467;
Tri-State Regional Extension Center



The KHIE currently offers participating healthcare providers two options of connectivity based on their current practices and technical capabilities, with a third option being planned. The first option is based on the ability to send and receive Continuity of Care Documents (CCDs) via defined industry standards. Recognizing that this is an emerging standard and that many Healthcare Information Systems (HIS) do not yet have this capability in their current releases, the KHIE provides a second option of connectivity through standard HL7, ADT, clinical transactions, and order messages. This option is commonly used in information exchange today and provides the same capabilities for providers seeking to demonstrate stage 1 meaningful use. The third option will utilize Direct.

Option 1: Healthcare providers who have the capability of sending or receiving CCDs connect via the web services provided by the KHIE. In this option, the CCD will be created by the HIS upon receiving an inquiry from the KHIE, and will then be consolidated with CCDs from other providers and with data extracted from Edge Servers described in Option 2. The consolidated CCD will then be returned to the inquiring provider's HIS, or displayed in the KHIE Community Virtual Health Record (VHR).

Option 2: Healthcare providers choosing this option will be connected to the KHIE utilizing Edge Server technology with VPN tunnel connectivity. This process includes a standard series of HL7 transactions sent via the healthcare provider's HIS to a secure Edge Server for storage and retrieval. The Edge Server is logically dedicated to and managed by the individual provider. From the Edge Server, the data is made available to the KHIE for exchange with other connected healthcare providers via inquiry, or through the KHIE Community Virtual Health Record. The KHIE Community VHR is a web-based portal that may be distributed to those healthcare providers who require access to the patient's summary health data, but do not have the capability of sending or receiving a CCD. As the provider's HIS begins the implementation of the capability to consume a CCD, KHIE staff will assist in that transition.

Option 3: Healthcare providers will have the ability to "push" information to another provider using KHIE's secure messaging capabilities and provider directories. This capability is in production for registered users of KHIE's VHR.

Kentucky's plan emphasizes outreach to all Kentucky physicians and other eligible providers. The process includes execution of the GOEHI participation agreement and initiation of the onboarding process. This process includes provider education, selection of the provider connectivity path and implementation of a technical work plan, and results in connection to the exchange. The exchange services will be offered at no cost for the first two years by leveraging funds from Kentucky's Medicaid Transformation grant and the State HIE Cooperative Agreement.



Coordination with Kentucky's RECs (the Kentucky Regional Extension Center at the University of Kentucky and the Tri-State Regional Extension Center), along with the establishment of a KHIE intake coordinator and an orchestrated onboarding process, has allowed KHIE to meet aggressive targets in connecting hospitals in the first year of operation, a record they plan to repeat throughout 2011 to assure access for any willing participant.

KHIE will serve as the on-ramp to the state immunization and cancer registries, reportable diseases, and syndromic surveillance reports. As of March 2011, Kentucky's state public health lab is connected to KHIE and will be delivering lab results to both hospitals and individual clinicians. Registered users will be able to access immunization records in the statewide registry, can submit immunization records and updates electronically via KHIE, and in a future release be able to print immunization certificates. State Public Health officials responsible for administration of the immunization registry have determined to use KHIE as the sole option for automated electronic submission of immunization records.



Highlights

- **KY-CHILD:** In 2006, CHFS launched the KY-CHILD (Certificate of Birth, Hearing, Immunization and Lab Data), a web-based application for the collection and submission of data related to birth certificates and newborn metabolic and hearing screenings. Each newborn is assigned a unique identifier and all information about the child is available through a single, integrated Web application.

Additionally, the Kentucky Division of Laboratory Services (DLS), with its Newborn Screening Program (NBS), tests for 44 metabolic disorders for over 55,000 live births annually. With the launch of KHIE in April 2010, the Kentucky Department of Public Health initiated an effort, in collaboration with GOEHI, to expand the capacity of KY-CHILD to connect the NBS program to the KHIE. The anticipated go-live for sending NBS results to KHIE is April 2011. Then the newborn metabolic screening results will be available to the pediatric medical home and other care providers and will become part of the child's electronic health record. The integration of the NBS program into KHIE was made possible through the diverse collaboration of a number of state entities.

- **Connectivity Assistance Program:** To incentivize early connectivity, the KHIE Connectivity Assistance Program will cover the following costs for participating hospitals and clinics through the end of 2012, using funds leveraged through the Medicaid Transformation Grant and the State HIE Cooperative Agreement programs:
 - Cost of Initial Connectivity: One-time cost for interface development and purchase of an Edge Server for each participating hospital and provider
 - Annual Licensing & Maintenance Cost



Meaningful Use

Landscape

Strategy

E-Prescribing

85% of community pharmacies accept electronic prescribing refill requests.

Surescripts reports a gradual increase in the percentage of prescriptions routed electronically in Kentucky; however the rate of use is still very low. Similarly, while the number of physicians routing prescriptions electronically has increased, less than one in five physicians are reported to be doing so.

KHIE is working closely with the RECs to conduct outreach and education to providers in order to encourage use of e-prescribing services and modules.

Structured Lab Results

70% of the 10 clinical laboratories (which account for 88% of Medicaid payment for labs) surveyed send results electronically.

GOEHI obtained a list from the Kentucky Medicaid program of payments made to clinical laboratories over the previous twelve month period. From the list, the ten laboratories receiving the highest amount of Medicaid payments were identified. (The combined total of receipts for the ten labs was 88 percent of the total payments made to laboratories during that period.) In a telephone survey of the labs, 7 of the 10 (70%) reported currently producing and delivering structured lab results to physicians and hospitals in Kentucky.

Earlier this year the Cabinet for Health and Family Services leadership worked with the Kentucky General Assembly during the 2010 Session to revise the Kentucky Revised Statutes to permit medical laboratory results to be transmitted to an electronic health information exchange or network for specified purposes with patient consent and compliance with HIPAA. Prior to the revisions, KRS 333.150 specified that the results of the laboratory test could only be provided to the clinician or authorized person who requested the test. With this change in statute, laboratory test results may be exchanged electronically. This change opens the door for the state public health laboratory to exchange lab results through the KHIE.

The KHIE will provide the technical platform for electronic exchange of health information statewide and a mechanism for bi-directional exchange through which hospitals and clinicians can electronically submit reportable lab results to the Department for Public Health, Division of Laboratory Services (DLS) and satisfy stage 1 meaningful use criteria. Financed through the Medicaid Transformation Grant and the Division of Laboratory Services, lab results delivery services through KHIE's clinician portal and / or EHR interfaces were implemented at a production level in December 2010. Each year in excess of 3 million tests are performed by the State Lab. The results will be delivered through the KHIE through direct EMR interfaces, the VHR and other means. Mapping to LOINC coding has resulted in mapping tables which have been reviewed by the National Library of Medicine. Kentucky Division of Laboratory Services has offered to share the coding with other states, and the KHIE staff is participating in ONC's Community of Practice for lab interoperability.

The statewide immunization registry, housing 85 percent of immunizations records for the state, is maintained by the Department for Public Health. Pilot connectivity to the KHIE began in August 2010. It is expected to go-live supporting bi-directional exchange by March 31, 2011, expanding access from current users (limited to local health departments) to any registered user of KHIE. The goal is to increase the number of immunizations recorded in the immunization registry to 90-95 percent through interoperability to the KHIE, as well as enabling access to any clinician with authorized access.



Patient Care Summary

Only a small percentage of providers are exchanging patient care summaries.

Less than one percent of hospitals have the current capacity to electronically exchange health information across unaffiliated networks to meet MU requirements.

The HIE Framework supports exchange of patient information via HL7 v2.x through which clinical messages can be sent and received.

The KHIE Framework architecture supports the user in extracting, storing, and viewing a CCD in a viewer; however, many EHRs are not mature enough, at present, to handle CCDs.

The Exchange Hub will be configured to orchestrate production of a consolidated CCD which will be sent to the requesting user through the KHIE Framework Exchange Hub.

By December 2011, connectivity of the KHIE web-based HIE framework to the VPN environment will support the extraction, storing, and viewing of a complete patient summary (CCD) for all KHIE users.



HIE Inventory

Standards		Quality Improvement	
Nationwide Health Information Network Exchange Specifications	X	Care Coordination	X
Nationwide Health Information Network CONNECT		Quality Reporting	X
Nationwide Health Information Network DIRECT	X	Behavioral Health Information Exchange	
Plans to exchange with federal agencies or other states via Nationwide Health Information specifications	X		
Public Health		Lab Strategy	
Electronic lab reporting of notifiable conditions	X	Translation services	X
Syndromic surveillance	X	EHR interface	X
Immunization data to an immunization registry	X	Policy strategy	X
Patient Engagement		Order Compendium	
Patient Access/PHR	X	Bi-Directional	X
Blue Button		Alignment with CLIA	X
Patient Outreach	X	E-Prescribing	
Privacy and Security		Medication History	X
Privacy and Security Framework based on FIPS		Incentive or grants to independents	
Individual choice (Opt In/Opt Out/hybrid)		Plan for controlled substance	X
Authentication Services	X	Set goal for 100% participation	
Audit Log	X	Controlled substance strategy	X
Administrative Simplification			
Electronic eligibility verification	X	Care Summaries	
Electronic claims transactions	X	Translation services	
Vendor		CCD/CCR Repository	X
Planning		Directories	
Core Services	ACS and Axolotl	Provider Directory	
		Master Patient Index	X
		Record Locator Services	X
		Health Plan Directory	
		Directory of licensed clinical laboratories	

Information for this profile was obtained from the approved Operational and Strategic Plan submitted to the National Coordinator for Health Information Technology as a condition of the Health Information Exchange Cooperative Agreement. The complete plan can be downloaded at: www.statehieresources.org



Office of the National Coordinator for Health Information Technology
State Health Information Exchange Cooperative Agreement Program
HealthIT.hhs.gov